

In the *Monthly Notices* of the Royal Astronomical Society for March 1872 are recorded the results obtained by Colonel Walker and Major St. John by telegraph between Teheran and Greenwich, from which was deduced the longitude of Teheran, viz.

$$51^{\circ} 24' 26'' \quad \text{or} \quad 3^{\text{h}} 25^{\text{m}} 39^{\text{s}}.73.$$

Major St. John had previously obtained the difference Teheran—Kurrachee. He does not give it, but he states that these two operations, combined with those of the great Trigonometrical Survey of India, bring out the longitude of Madras within half a minute of arc of that given in the *Nautical Almanac*.

The latter is $5^{\text{h}} 20^{\text{m}} 57^{\text{s}}.3$; therefore he must have made the difference Teheran—Kurrachee $1^{\text{h}} 55^{\text{m}} 17^{\text{s}}.57 \pm 2^{\text{s}}$.

In 1874 Dr. Becker determined the difference between Teheran and Ispahan, and this affords us the means of comparing the operations of 1872 and those of 1874.

According to Dr. Becker the difference Teheran—Ispahan is $58^{\text{s}}.8$, and as Ispahan—Madras is $1^{\text{h}} 54^{\text{m}} 19^{\text{s}}.3$, there results for Teheran—Kurrachee, by the operations of 1874, $1^{\text{h}} 55^{\text{m}} 18^{\text{s}}.11$, from which Major St. John differs by $.54^{\text{s}} \pm 2^{\text{s}}$. The local time was obtained by Colonel Walker, by Sextant, that by Dr. Becker by Transit Instrument.

The longitude of Teheran obtained by Colonel Walker does not quite agree with that obtained by Dr. Becker. The latter was

	h	m	s
Berlin—Teheran	2	32	6.68
Long. Berlin by <i>Nautical Almanac</i>	0	53	34.9
Resulting longitude of Teheran	3	25	41.58,

from which Colonel Walker differs by $1^{\text{s}}.85$.

At Kurrachee my Observatory was $0^{\text{s}}.6$ east of that used in the great Trigonometrical Survey of India at that place. Major St. John's exact station is not given.

The Hill House, Melton, Suffolk,
December 4, 1877.

Extract from a Letter from R. J. Ellery, Esq., to the Astronomer Royal, dated Melbourne, 1877, October 3.

MY DEAR SIR GEORGE,—Your telegram of the 17th August relative to suspected satellites of *Mars* reached me on the 22nd, and we have taken every opportunity since of searching, but as yet without success. Unfortunately the great telescope has been *hors de combat*, part of the declination movement having broken. This is now nearly repaired, and in the meantime the

watch has been kept with the 8" refractor. Our scrutiny assumes the satellites (if they exist) to be very faint objects, and we are obliged to eclipse *Mars* itself to enable us to take our search close to his limb.

Extract from a Letter from R. J. Ellery, Esq., to the Astronomer Royal, dated Observatory, 1877, October 31.

MY DEAR SIR GEORGE,—We continued our search for *Mars*' satellites up to the 27th instant, but, with the exception of one occasion, upon which *we believe* we saw one of them, our search has been fruitless. The occasion referred to was on the night of the 16th October, when *Mars* occulted a star of about the 13th magnitude at 22^h 15^m (Sid. Time); after emergence a very faint point (20th magnitude estimated) was seen half a diameter from *Mars* s.p.; this was watched for nearly an hour, when its position indicated a motion with *Mars*, but before any verifying measures could be made the sky became cloudy, and no other signs of satellites have been observed since. Our first search with the great telescope was on the 26th September, and it is very probable our want of success is due to our lateness in the field.

We have obtained a fine series of observations for the parallax of *Mars* with our Transit Circle.

The Opposition of Mars, 1877. By Maxwell Hall, Esq.
(Abstract.)

Observations of *Mars* were made in Jamaica during the last opposition of the planet, in order to determine the Solar Parallax by means of the displacement of the planet in Right Ascension, when far east and far west of the meridian as seen at a single place.

The small Observatory is situate about $5\frac{3}{4}$ miles south-east of Montego Bay, on a range of hills 1800 feet above the sea-level. The buildings consist of a square Transit-room and a circular tower for the Equatoreal. The piers of the instruments are founded on solid rock, and the whole of the mason-work is compact and substantial.

The instruments were made by Messrs. Cooke & Sons, of York, and the mounting of the Equatoreal is very firm and massive. The aperture of the object-glass is only 4 inches, but the definition is very good. The transit eye-piece has five wires about 2' 45" apart, and a power of 120 was employed. The Transit Instrument has an aperture of 3 inches. The clock is provided with a mercurial compensating pendulum and the dead-beat escapement; it was an inexpensive instrument (cost-